

Appl. No. 09/521,641
Amdt. dated Jan. 30, 2007
Reply to Office Action of Oct. 31, 2006

REMARKS/ARGUMENTS

If the Examiner believes that there are any unresolved issues in any of the claims now pending in the application, the Examiner is urged to telephone George Wolken, Jr., Esq. at (408) 567-0340 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Amendments to Claims 1-9

Claim 1 is amended to delete the reference to claim 16 and replace this reference with explicit language derived from claim 16. Claim 1 is also amended to delete the reference to claim 17 and replace it with explicit language derived from claim 17. These amendments are intended for clarity of expression.

Claim 1 is also amended to remove "recursive digital oscillator" from the preamble since this element is included in the body of the claim.

"Of" is deleted from claim 1 for economy of expression.

The final phrase added to claim 1 is to meet the objections of the Examiner under 35 U.S.C. § 101 as described in detail below.

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Claim Rejections- 35 U.S.C. § 101--Claims 1-9.

Claim 1 is amended to include the phrase "...thereby synthesizing audio samples." Support for this addition is found explicitly and implicitly in several locations throughout the Substitute Specification, in particular paragraph [0030], page 7, lines 6-7. Thus, claim 1 relates to a process for "...receiving digital audio signal frames...", performing specified processing steps as described in claim 1 and yielding "...digital audio samples." Applicants respectfully submit that claim 1 fully meets the requirements of 35 U.S.C. § 101 as interpreted in case law, MPEP and USPTO Guidelines.

Claims 1-9 fall into the statutory category of "process," but are rejected by the Examiner on the basis that such claims are directed to an abstract idea, thus falling into a judicial exception to patentability as a process. Applicants respectfully submit that claim 1, as amended, produces a "Useful Result", meeting the requirements of MPEP § 2106 IV.C.2(2)(a), and/or produces a "Tangible Result" meeting the requirements of MPEP § 2106 IV.C.2(2)(b), and also a "Concrete Result" meeting the requirements of MPEP § 2106 IV.C.2(2)(c).

Embodiments of the present invention relate to the practical application of producing sounds from digital audio signals, typically but not exclusively music and, typically but not exclusively, as part of a real-time performance. As described in the specification, producing sounds under such conditions encounters several challenges, including but not limited to producing sounds of sufficient quality in

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real-time under performance conditions and/or producing such sounds with equipment of moderate cost. Applicants submit that the production of audible sounds from digital information fully meets the standards for a useful, tangible and concrete process.

Applicants submit further that, in dealing with a statutory process not falling under a judicial exception, an applicant is not obligated to claim the entire process but may patent novel and nonobvious improvements to one or more components or steps of such a process. As arising here, the result of claim 1 is the synthesis of audio samples that may, but need not, be immediately converted into audible sound. Applicants respectfully submit that inclusion of such a sound-producing step in claim 1 is unnecessary under §101 jurisprudence and, if present, could deprive the Applicants of their rightful scope of patent protection. For example, the audio samples produced according to the steps of claim 1 as presently drafted can be stored for an arbitrarily long period of time and performed only after any patent claim requiring the production of audible sound has expired. Also, the audio samples produced pursuant to claim 1 could be transmitted beyond the geographic reach of US patent law and only there assembled into audible sounds. Applicants respectfully submit that they are entitled to claim novel and nonobvious component and/or steps of a statutory process as herein independent claim 1 and dependent claims 2-9.

Claim 1 is directed to certain aspects of processing digital audio signal frames in an improved manner according to the terms of claim 1. Thus, claim 1 is

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directed to the practical application of improving the production of sound from digital audio signal frames by improving certain processing steps in the processing pathway from digital frame input to audible sounds. Producing audible sounds from the additive synthesis recited in claim 1 is known in the art and can be accomplished by numerous techniques. Thus, claim 1 provides a "useful result" in compliance with MPEP § 2106 IV.C.2(2)(a), a tangible result in compliance with MPEP § 2106 IV.C.2(2)(b) and a concrete result in compliance with MPEP § 2106 IV.C.2(2)(c). Dependent claims 2-9 deriving from independent claim 1 are thus patentable as well, applying the same arguments as for claim 1.

Amendments to Claims 10-13

Independent claim 10 has been amended in accordance with the suggestions of the examiner on page 3 of the office action, and also amended to include explicitly language from claims 16 and 17 (now cancelled).

Conclusion

In view of the above amendments and arguments, the Applicants respectfully submit that claims 1-13 now pending in the application are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

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Respectfully submitted,

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I hereby certify that this paper (and any accompanying paper(s)) is being facsimile transmitted to the United States Patent Office on the date shown below.

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Signature

January 30, 2007
Date